2012 American College of Physicians Minnesota Poster Competition Winners

Each year, the state chapters of the American College of Physicians (ACP) invite medical students and internal medicine residents to take part in a scientific poster competition. Last November, residents and students submitted 218 posters for consideration at the Minnesota chapter’s annual meeting in Minneapolis. Each of the internal medicine training programs in the state (the University of Minnesota, Abbott Northwestern Hospital, Mayo Clinic and Hennepin County Medical Center) were well-represented with submissions in the clinical vignette, quality improvement, research and medical student categories. In addition to winners in each category, a “People’s Choice” award was selected by popular vote.

Posters were judged by practicing internal medicine physicians, internists from the state’s academic medical centers and chief residents. “Poster Rounds” were conducted for the peer judging process. The judges’ criteria included clinical relevance, originality, and written and visual presentation. Special thanks to Charles Reznikoff, M.D., and Andrew Olson, M.D., for coordinating the competition.

The winners will present their posters at the ACP’s annual meeting in San Francisco, April 9-13, 2013. Earlier this year, two of the 2011 Minnesota winners won national awards from the ACP.

Congratulations to all of the participants on their excellent work.

Clinical Vignette Winner

**AIDS Masquerading as Dermatomyositis: Underscoring the Importance of Sexual History**

By Shaun Morrow, M.D., Abbott Northwestern Hospital

Sexual history continues to be one of the least reliably obtained components of the medical interview in primary care settings, leading to lost opportunities for appropriate STI (sexually transmitted illness) screening as well as counseling regarding safe sexual practices. In this case, obtaining a routine sexual history may have prevented a delay in diagnosis of HIV and subsequently AIDS for one patient.

That patient, a 53-year-old man with a longstanding diagnosis of amyopathic dermatomyositis, was admitted to the hospital for evaluation and treatment of steroid unresponsive interstitial lung disease. On admission, the patient demonstrated significant hypoxia (oxygen saturation 74% on room air) with peripheral cyanosis and moderate respiratory distress. He was later admitted to the ICU for respiratory support with noninvasive positive pressure ventilation and intravenous steroids. CXR revealed diffuse ground glass opacities thought to be consistent with interstitial pulmonary disease. However, given the patient’s deteriorating respiratory status, ongoing weight loss and lack of support for a dermatomyositis diagnosis (negative ANA, ENA and anti-Jo 1, skin biopsy nonspecific), an alternative etiology was suspected. Sexual history revealed that the patient had several sexual encounters with male partners five years prior. His HIV screening was positive and CD4 count was 9 cells/mm3.

The man was empirically treated for *Pneumocystis* pneumonia, which was later confirmed by biopsy obtained during bronchoscopy. He was also found to have CMV viremia and was treated with valganciclovir. With appropriate management, his condition improved and he was discharged from the hospital. HAART (highly active antiretroviral therapy) was initiated, and the patient’s CD4 count rebounded.

This case illustrates the importance of obtaining a sexual history in all patients, including those perceived to be at low risk for STIs. This patient was a husband and father, which may have contributed to the failure to obtain a sexual history. Recent stud-
ies indicate that the sexual history is often omitted in the primary care setting; only 35% of primary care providers state that they often (75% of the time) or always take a sexual history. Physicians cite embarrassment and time constraints as reasons for excluding discussion of sexual health.

The sexual history is an underutilized and cost-effective means for early detection of STIs as well as a gateway to discussion of safe sexual practices and behavioral risk reduction. An adequate sexual history should include documentation of sexual orientation, previous and current sexual partners, sexual practices and use of barrier protection.

REFERENCE


Research Winner

Asymptomatic Transaminitis in Newly Arrived Refugees to Minnesota

BY MALINI DESILVA, M.D., ANN SETTGAPOINT, M.D., DTM&H, JOSE DEBES, M.D., CHRISTOPHER ANDERSON, M.P.H., AND WILLIAM STAUFFER, M.D., M.S.P.H., UNIVERSITY OF MINNESOTA

The Minnesota Refugee Health Assessment is a clinical evaluation performed within 90 days of a person's entry to the United States. More than 95% of newly arrived refugees in Minnesota undergo this examination. HealthPartners Center for International Health (CIH) in St. Paul provides care for many of these refugees.

Since 2008, Burmese and Bhutanese Nepali refugees have been two of the largest groups arriving in Minnesota. There is limited published data on the health status of these groups; however, a recent study of Karen (Burmese) refugees in Australia showed elevated ALT in 16.1% of patients using 40 U/L as an upper normal limit. Unpublished observations from health practitioners at CIH suggest a significant number of new Bhutanese and Burmese refugees have asymptomatic mild elevations of ALT and AST discovered during new arrival screening.

We performed a retrospective cohort study of refugees presenting to CIH for new arrival screening between May 1, 2009, and September 30, 2011, to evaluate for any significant differences between refugee groups and to explore possible associations with asymptomatic transaminitis, if present. This study was approved by the HealthPartners Research Foundation with a waiver of informed consent because of the retrospective data collection and large study size. Demographic and clinical data obtained during initial new arrival screening were extracted and audited to ensure accuracy. Statistical analysis was performed using SAS v9.2.

We found a statistically significant difference in ALT levels between groups, with the prevalence appearing to be much higher in the Bhutanese Nepali and Karen/Karenni/Burmese groups than in all other refugee groups. In addition to ethnic associations, multivariate analysis showed associations between increased BMI, male gender and hepatitis B infection, and transaminase elevation. Hypothesized etiologies of transaminitis include alcohol use in refugee camps and lack of access to alcohol when arriving in Minnesota with slower degradation of ALT than AST, a viral hepatitis not routinely screened for in new arrivals, administration of hepatitis B vaccination in refugee camps prior to departure, a nutritional deficiency or environmental/toxin exposures in refugee camps. Further analysis of collected data and future prospective analysis will help elucidate the etiology and clinical implications of this transaminitis.

Quality Improvement Winner

Venous Thromboembolism Prophylaxis for Medical Patients: Implications for a Standardized Order Set

BY DARYN COLLINS, M.D., M.P.H., AARON GRAUmann, M.D., KATIE LORENTZ, M.D., ADAM FOSS, M.D., ERIC BOMBERG, M.D., AND PAULA SKARDA, M.D., UNIVERSITY OF MINNESOTA

Each patient admitted to Regions Hospital in St. Paul is evaluated for risk of venous thromboembolism (VTE). Based on their degree of risk, patients receive mechanical prophylaxis, chemical prophylaxis, both or neither. The current admission order set follows the Institute for Clinical Systems Improvement guidelines to determine degree of risk. Using the newest guidelines published in Chest in 2012, which make use of the Padua Prediction Score, we set out to determine if Regions Hospital is over- or under-utilizing chemical prophylaxis for VTE.

Methods: A chart review was performed on patients admitted to a general medicine or critical care service at Regions Hospital between February 1, 2012, and March 31, 2012. Risk factors for VTE were tabulated based on the Padua Prediction Score for each patient. It was noted if the patient received VTE prophylaxis (mechanical, chemical or both). The type of chemical prophylaxis was recorded (unfractionated heparin, enoxaparin, dalteparin, fondaparinux or warfarin continued from the outpatient setting). Data analysis was performed comparing those patients in high-risk groups with those in low-risk groups, as defined by the Padua Prediction Score.

Results: Four hundred and eighty-six patients were admitted to a general medicine or critical care service at Regions Hospital during the study period. Patients were excluded from further analysis if they were admitted to the intensive care unit or if they were on chronic anticoagulation. The final analysis included 322 patients. Being at high risk for VTE was defined as having a score greater than or equal to a Padua Prediction Score of 4. Of the 322 patients, 269 were considered low-risk. One hundred forty of those patients (52%) did not receive chemical prophylaxis, while 129 (48%) did receive chemical prophylaxis. Fifty-three patients met the criteria for being at high risk. Eighteen of those patients (34%) did not receive chemical prophylaxis, while 35 (66%) did.

Conclusion: A significant number of patients who were considered to be at low risk for VTE, based on the Padua Prediction Score, received chemical prophylaxis. This may have implications for modification of the current hospital order set and for significant cost savings.
Medical Student Winner
Effect of Group Visits on Care of Patients with Type 2 Diabetes

BY JOSH DORN, QI WANG, M.S., AND BRIAN SICK, M.D., UNIVERSITY OF MINNESOTA MEDICAL SCHOOL

We conducted a retrospective cohort study of individuals with type 2 diabetes who attended group visits in the University of Minnesota Primary Care Clinic from 2006 to 2012. It was hypothesized that patients who attended group visits would experience improved diabetes care compared with patients who had only outpatient clinic-based care, and that there would be a positive correlation between outcomes and the number of group visits attended.

Methods: We defined two cohorts. The first, the group-visit cohort (n=48), was composed of those who partook in group visits along with outpatient clinic visits. The second, the comparison-cohort cohort (n=44), was composed of those who attended outpatient clinic visits only. Data were collected via chart review for patients in the group-visit cohort before their first group visit and after their final visit. Data on the comparison group were collected over a time period that was equivalent to the average timespan that the group-visit cohort attended group visits (for those who attended more than two group visits). Outcomes measured were the ones set forth by the American Diabetes Association for optimal diabetes care including LDL cholesterol, A1C, blood pressure and health maintenance (foot exams, eye exams, vaccinations); overall optimal care also was measured.

Results: For patients who attended more than eight group visits, there was a 36.4% increase in the number who received optimal care, whereas there was an 11.4% decrease in the number who received optimal care in the comparison group (overall difference \(P=0.04\)). For patients who attended more than two group visits, there was a 13.8% increase in the number with an up-to-date foot exam versus a 29.5% decrease in the comparison group (\(P=0.01\)). For current eye exams, there was no change in the group visit group and a 43.2% decrease in the comparison group (\(P=0.017\)). No other results reached statistical significance.

Conclusion: Group visits for patients with type 2 diabetes at the University of Minnesota Primary Care Clinic were associated with statistically significant increases in the number who met goals for up-to-date foot and eye exams. Additionally, optimal care was most improved among those who attended the greatest number of group visits. Possible reasons for these improvements are increased time with the provider, additional time dedicated solely to type 2 diabetes care and the camaraderie of fellow patients who are facing similar problems. It is hoped that these results, along with other studies, will help group visits become a standard of care in treating type 2 diabetes.

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